EXHIBIT A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Scheer et al.
Appl. No.:	10/788,542
Conf. No.:	7084
Filed:	February 27, 2004
Title:	BIODEGRADABLE POLY(LACTIC ACID) POLYMER COMPOSITION AND FILMS, COATINGS AND PRODUCTS COMPRISING BIODEGRADABLE POLY(LACTIC ACID) POLYMER COMPOSITION
Art Unit:	1773
Examiner:	V. Chen
Docket No.:	117682-002

AFFIDAVIT UNDER 37 C.F.R. § 1.132

Sir:

I hereby state as follows:

1. My experience and qualifications are as follows:
I received a B. S. in Chemistry – 1975 from SUNY at Albany. I worked at GE Plastic – Selkirk, NY and Amoco Performance Products – Atlanta, GA doing plastic product development. Since 1993, I have been engaged in poly(lactic acid) polymer development with several companies: DuPont, Chronopol, Hycail BV in NL, recently with Cereplast, Inc. - helping by development of new products for emerging applications in biopolymer area.

2. I am one of the named inventors of the above-identified patent application and am therefore familiar with the inventions disclosed therein.

3. I have reviewed the outstanding Office Action dated May 3, 2007 pending against the above-identified patent application. In addition to considering the outstanding Office Action, I have reviewed the references cited therein, U.S. Patent No. 5,756,651 to Chen et al. ("*Chen*"), U.S. Patent No. 5,594,095 to Gruber et al. ("*Gruber*"), U.S. Patent No. 6,869,985 to Mohanty et al. ("*Mohanty*") and U.S. Patent No. 5,500,465 to Krishnan et al. ("*Krishnan*"), as well as the

pending claims. As one skilled in the art, I believe that the cited references teach away from each other and the claimed invention for the reasons set forth below.

4. *Chen* is entirely directed to a degradable film having excellent flexibility and impact strength for packaging applications, particularly lawn and trash bags. *Chen's* film is a blend of polylactide as the major component along with a degradable impact modifier for increased impact strength and a degradable low molecular weight plasticizer for increased impact strength and flexibility. See, *Chen*, column 3, lines 43-65. *Chen* fails to disclose or suggest as a starting material an organic peroxide ranging from 0.1% and 4.5% by weight of a total composition in accordance with the claimed invention. Moreover, *Chen* fails to disclose or suggest that the organic peroxide is added to a mixture of poly(lactic acid) and poly(epsilon caprolactone) to produce a final biodegradable film in accordance with the claimed invention. *Chen* fails to even recognize the advantages and benefits of adding organic peroxide as a starting material in his film and has no reason for doing so because his own formulation already produces a sufficiently flexible and durable film for packaging applications.

5. *Gruber* teaches improving certain characteristics of a polylactide polymer composition such as the viscosity, melt strength and rheology specifically for improved use as a coating film. *Gruber* teaches a polylactide polymer composition that is prepared by using polylactide polymer molecules, which have been modified relative to linear non-substituted polylactide, to provide increased molecular interaction among polylactide backbone chains in the composition. See, *Gruber*, column 4, line 54 to column 5, line 23. *Gruber* teaches that the lactide polymers of his invention are melt-stable meaning generally that the lactide polymer, when subjected to melt-processing techniques, adequately maintains its physical properties and does not generate by-products in sufficient quantity to foul or coat processing equipment. See, *Gruber*, column 24, lines 46-60. Consequently, *Gruber* is directed to a non-plasticized formulation having its own unique polylactide polymer composition for extrusion coating of paper board, which leads away from a combination with *Chen* because *Gruber* requires different properties and characteristic than degradable films used for packaging applications as taught by *Chen*.

6. *Gruber* also teaches that his polymer composition is made from the polymerization of lactide monomers using a reactant to improve the final polymer, polylactide acid ("PLA"). See, *Gruber*, column 3, lines 20-44 and column 24, lines 19-45. The method of producing the polymer involves forming polylactide molecules in a procedure including a reactant in addition to unsubstituted lactic acid or lactide. The reactant provided includes a non-initiating lactide reactant, an initiating reactant, a combination reactant and/or mixtures thereof. The reactant other than lactic acid or lactide can be an initiating reactant having one initiating group therein. In other words, the compositions described by *Gruber* are part of the creation of a PLA polymer. In contrast to *Gruber*, the claimed invention is directed to using an already existing poly(lactic acid) with additional components. As a result, the skilled artisan would be lead away from the claimed invention by using *Gruber*.

7. *Mohanty* is directed to polymeric materials for sheet flooring material. The polymeric material includes a conventional PLA based polymer in combination with a plasticizer and a compatibilizer. Although *Mohanty* teaches that, among many other additives, peroxides can be advantageously added to already polymerized material and, when heated can cause the material to crosslink (see, *Mohanty*, column 8, lines 10-14), *Mohanty* teaches away from a combination with the *Gruber*, which uses peroxides for providing bridging in the linear lactide polymer thereby converting it into a less linear lactide polymer for forming a final PLA polymer composition. See, *Gruber*, column 10, lines 28-30.

8. *Krishnan* is directed to producing durable, cost-effective materials that can be used as biodegradable moldings or films, more precisely polyester based polymer compositions comprising a substantial amount of starch incorporated in the blend composition. The polymers have their own unique film forming properties and are resistant to water and moisture. *Krishnan* teaches blends of unmodified starch and a biodegradable polyester, preferably poly-epsilon-caprolactone. See, *Krishnan*, column 4, lines 15-17. According to *Krishnan*, his blend component materials comprise optionally peroxide initiators to cross-link the polyester and

improve melt strength. In other words, *Krishnan* solely teaches that poly(epsilon-caprolactone) may be melt-crosslinked by the use of peroxides to improve the melt strength of the blend. As a result, *Krishnan* teaches away from a combination with the *Gruber*, which used peroxides for providing bridging in the linear lactide polymer thereby converting it into a less linear lactide polymer for forming a final PLA polymer composition.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001, Title 18, United States Code, and that willful false statements may jeopardize the validity of this patent and any patent issuing therefrom.

Date: July 10, 2007

William E. Kelly

Print Name William E Kelly